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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,399	06/23/2003	Torsten Hagen	PO-7652/LeA 35689	5260
157	7590	12/14/2004	EXAMINER	
BAYER MATERIAL SCIENCE LLC 100 BAYER ROAD PITTSBURGH, PA 15205			SERGENT, RABON A	
			ART UNIT	PAPER NUMBER
			1711	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/606,399

Applicant(s)

HAGEN ET AL.

Examiner

Rabon Sergent

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/23/03, 10/23/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Art Unit: 1711

1. Claims 11-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The process of claims 11-20 allows for the polyisocyanate product to be in the presence of the alcohol; however, applicants have failed to teach how to prevent reaction between the alcohol and isocyanate groups.

2. Claims 8 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The language, "the organic phase", lacks antecedence.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-5, 9, 11-15, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 99/40059.

WO 99/40059 discloses the production of MDA and MDI. MDA is produced by reacting aniline and formaldehyde in the presence of an acid catalyst. The product is then neutralized with aqueous sodium hydroxide. The MDA may then be phosgenated to yield the MDI. See abstract and page 4 within WO 99/40059. WO 99/40059 further discloses that the formaldehyde reactant may contain poly(oxymethylene) glycols. See page 4, especially, lines 40+. The position is taken that the recitation of the poly(oxymethylene) glycol component meets applicants' claimed alcohol component. One would immediately envisage from the teachings of the reference a reaction system containing an alcohol component.

5. Claims 1-5, 9-15, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ross et al. ('099).

Ross et al. disclose the production of MDA and MDI. MDA is produced by reacting aniline and formaldehyde in the presence of an acid catalyst. The product is then neutralized with aqueous sodium hydroxide. The MDA may then be phosgenated to yield the MDI. See abstract; column 1, lines 41-51; and columns 5 and 6 within Ross et al. Ross et al. teach at column 5, line 62 and column 6, line 41 that the formaldehyde component contains methanol. Therefore, applicants' alcohol component is disclosed by Ross et al.

Art Unit: 1711

6. Claims 1, 2, 6, 7, 9-12, 16, 17, 19, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Adkins et al. ('971).

Adkins et al disclose the production of p-MDI wherein a reducing agent is added to the amine, resulting from the reaction of aniline and formaldehyde, at any time following the addition of the neutralizing agent and before the stripping of the solvent used for phosgenation, then the excess reducing agent is quenched with methanol. See examples. Additionally, patentees disclose that hindered phenols may be used as the reducing agent; and it is noted that the hindered phenol reducing agent also meets applicants' alcohol component.

7. Claims 11 and 17 are ejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/40059 or Ross et al. ('099), each in view of Scherzer et al. ('043 or '368).

WO 99/40059 and Ross et al. disclose the production of MDA and MDI. MDA is produced by reacting aniline and formaldehyde in the presence of an acid catalyst. The product is then neutralized with aqueous sodium hydroxide. The MDA may then be phosgenated to yield the MDI. See abstract and page 4 within WO 99/40059. See abstract; column 1, lines 41-51; and columns 5 and 6 within Ross et al.

8. Though the primary references fail to teach the addition of an alcohol component after neutralization of the amine to be phosgenated, the addition of hydroxyl group containing components to phosgenated amines to control color was known at the time of invention. This position is supported by the teachings of the secondary references. Therefore, the position is taken that it would have been obvious to utilize such hydroxyl containing components within the methods of the primary references for the purpose of controlling the color of the resultant

Art Unit: 1711

isocyanate. The position is taken that applicants' claims provide for the addition of the alcohol component at any time after neutralization.

9. Claims 11, 17, and 20 are ejected under 35 U.S.C. 103(a) as being unpatentable over WO 99/40059 or Ross et al. ('099), each in view of Scherzer et al. ('942) or Danielmeier et al. ('925).

WO 99/40059 and Ross et al. disclose the production of MDA and MDI. MDA is produced by reacting aniline and formaldehyde in the presence of an acid catalyst. The product is then neutralized with aqueous sodium hydroxide. The MDA may then be phosgenated to yield the MDI. See abstract and page 4 within WO 99/40059. See abstract; column 1, lines 41-51; and columns 5 and 6 within Ross et al.

10. Though the primary references fail to teach the addition of an alcohol component after neutralization of the amine to be phosgenated, the addition of an alcohol component to phosgenated amines to control color was known at the time of invention. This position is supported by the teachings of the secondary references. Therefore, the position is taken that it would have been obvious to utilize such alcohols within the methods of the primary references for the purpose of controlling the color of the resultant isocyanate. The position is taken that applicants' claims provide for the addition of the alcohol component at any time after neutralization.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

R. Sergent
December 11, 2004


RABON SERGENT
PRIMARY EXAMINER